

# **ABSTRACT**

A method for measuring a characteristic of a substrate, including directing an incident beam at an inspection grid of points on the substrate, receiving the reflected beam with a position sensitive detector, measuring the displacement of the reflected beam from its expected location, compiling a database of the displacement measurements, examining the database for effects of a pattern induced anomaly in the displacement measurements, producing an adjusted database, and deriving the characteristic of the substrate from the adjusted database. Thus, pattern induced errors from the displacement measurements are corrected. In this manner, problems with interpreting the reflection angles of a beam in substrate stress analysis equipment are overcome where distortions in the reflection angles are caused by deposition patterns on the substrates.

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